
Relative and Absolute Apriority

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RELATIVE AND ABSOLUTE APRIORITY*

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I

The theory of direct reference is the theory that proper names and other simple singular terms are nondescriptive in content. Proponents and expounders have agreed that one of the theory's remarkable consequences, discovered by Kripke, is that such identity sentences as 'Hesperus is Phosphorus' and 'Cicero is Tully' semantically contain necessary truths even though they are *a posteriori* and informative.¹ Whereas the possibility of necessary *a posteriori* truth — of facts that could not have been otherwise yet cannot be known except by empirical means — is philosophically remarkable for its own sake, the claim that the direct-reference theory yields this consequence is especially dramatic. Gottlob Frege, in the opening paragraph of "*Über Sinn und Bedeutung*," noted the aposteriority and syntheticity of such sentences as 'Hesperus is Phosphorus' and 'Cicero is Tully' in generating what I call 'Frege's Puzzle', which forms the core of his principal argument against Millianism — a version of direct-reference theory according to which the sole contribution made by a proper name, as occurring in a typical context, to the proposition content of the sentence in which it occurs is its referent (bearer, denotation, designatum). Frege asks: *If Millianism is correct, how can 'Cicero is Tully' differ in epistemological status from the a priori 'Cicero is Cicero'?* Certainly there is considerable tension between direct-reference theory and the evident *a posteriori* informativeness of identity sentences like 'Cicero is Tully'. How is this apparent conflict to be resolved?

A word of caution: One can maintain that 'Cicero is Tully' is "*a posteriori*" or "informative," and mean by this that the linguistic fact that the sentence 'Cicero is Tully' is true (in English) is a nontrivial fact that is knowable only on the basis of experience.² But it is hardly

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remarkable that there are necessary truths that are “*a posteriori*” or “informative” in this attenuated sense. Nor could the claim that ‘Cicero is Tully’ is “*a posteriori*” in that sense, once properly understood, be regarded as threatening the theory of direct reference. Which sentences of English are true, or necessary, is an empirical matter concerning the relationship between English and the world; all true sentences of English are “*a posteriori*” in the attenuated sense. By the same token, which sentences of English are true, or necessary, is, at least to a large extent, a contingent matter. The claim that ‘Cicero is Tully’ is necessary even though *a posteriori* and informative is philosophically significant, at least initially, because it concerns the means by which one might come to know the nonlinguistic, necessary truth that Cicero is Tully.

One pioneering direct-reference theorist provided (in a footnote) an intriguing account of how the claim that identity sentences like ‘Cicero is Tully’ are *a posteriori* might be reconciled with Millianism. Keith Donnellan says:

I introduce the expression ‘exotic necessary truths’ not just to dramatize the interest of Kripke’s discovery [that certain sentences involving rigid designators turn out to express necessary truths although the fact that they express truths is to be learned by empirical means]. The more obvious term ‘*a posteriori* truths’ obscures an important point. If we distinguish a sentence from the proposition it expresses then the terms ‘truth’ and ‘necessity’ apply to the proposition expressed by a sentence, while the terms ‘*a priori*’ and ‘*a posteriori*’ are sentence relative. Given that it is true that Cicero is Tully (and whatever we need about what the relevant sentences express) ‘Cicero is Cicero’ and ‘Cicero is Tully’ express the same proposition. And the *proposition* is necessarily true. But looking at the proposition through the lens of the *sentence* ‘Cicero is Cicero’ the proposition can be seen *a priori* to be true, but through ‘Cicero is Tully’ one may need an *a posteriori* investigation (“Kripke and Putnam on Natural Kind Terms,” in C. Ginet and S. Shoemaker, eds., *Knowledge and Mind*, Oxford University Press, 1983, pp. 84–104, at p. 88n).³

By contrast, in developing and defending a version of Millianism, I argued in *Frege’s Puzzle* that such identity sentences as ‘Cicero is Tully’ are both *a priori* and uninformative — indeed analytic — since the proposition content of ‘Cicero is Tully’ is just the singular proposition about Cicero that he is him, a trivial truism that is in principle knowable with complete certainty solely on the basis of reflection (including the faculty of reason), without recourse to any experience beyond what may be needed simply to be able to apprehend singular propositions involving Cicero.⁴ Donnellan and I thus seem to have provided two competing Millian accounts of the epistemological status of such sen-

tences as 'Cicero is Tully'. This raises the question of which account, if either, is correct.

II

It must be admitted that for such sentences as 'Cicero is Tully', understanding and reason alone are not sufficient without empirical investigation to reveal their truth. In order to know the proposition content independently of experience, one must also apprehend that proposition in a way that is sensitive to its special logical status. This fact, however, does not establish that such sentences are *a posteriori* rather than *a priori*. Even a straightforwardly analytic and *a priori* sentence can share the property that one must apprehend its content in a special way in order to know that proposition independently of experience. Kripke provides the basis for one such example:

A speaker . . . may learn 'furze' and 'gorse' normally (separately), yet wonder whether these are the same, or resembling kinds. (What about 'rabbit' and 'hare'?) It would be easy for such a speaker to assent to an assertion formulated with 'furze' but withhold assent from the corresponding assertion involving 'gorse'. The situation is quite analogous to that of [a speaker who uses 'Cicero' and 'Tully' normally but sincerely and reflectively assents simultaneously to 'Cicero was bald' and 'Tully was not bald']. Yet 'furze' and 'gorse', and other pairs of terms for the same natural kind, are normally thought of as *synonyms* ("A Puzzle about Belief," p. 134).

Kripke's speaker presumably learned the words 'furze' and 'gorse' on separate occasions by something like ostensive definitions, without thereby learning that the two words are co-extensional, let alone synonymous. Has the speaker therefore failed to learn one or both of the words? Not necessarily. Most of us learn one of the two words by ostensive definition, and the other as a word that is interchangeable with the first, in a sort of verbal (non-ostensive) definition. We might be told something like "Furze is that stuff growing over there," and later "Gorse' is another word for furze." Alternatively, we might be told "Gorse is that stuff growing over there," and later "Furze' is another word for gorse." If either of these words can be learned by ostensive definition, then both can be. Kripke's speaker has done so. If those words are indeed synonyms,⁵ then the sentence 'Furze is gorse' is analytic and *a priori*. But Kripke's speaker, while assenting to 'Furze is furze', does not assent to 'Furze is gorse'. Why not? Not because the

words are not synonyms in the speaker's idiolect. It is not as if he or she misunderstands 'gorse' to mean *heather*. The speaker has correctly learned both 'furze' and 'gorse'. If they are synonyms in English, they are therefore synonyms also in the speaker's idiolect. The problem is that the speaker does not realize that. He or she understands both 'Furze is furze' and 'Furze is gorse' without recognizing their synonymy. In particular, he or she understands 'Furze is gorse', but fails to recognize the proposition thus expressed as the logical truth that furze is furze.

The general phenomenon is not restricted to natural-kind terms. As I have argued elsewhere, someone may also fail to apprehend the content of the sentence 'Ketchup is catsup' in the right way if he or she learned 'ketchup' and 'catsup' independently — not by being told that they are synonyms but, for example, by consuming the condiment and reading the labels on the bottles, in a sort of ostensive definition.⁶ The sentence 'Ketchup is catsup' is unquestionably analytic — despite the fact that the speaker, who correctly understood both words even before learning of the identity, might sincerely say, "I'm fond of ketchup, but I find the taste of catsup repugnant." In fact, it is arguable that 'ketchup' and 'catsup' are not two words, but alternative spellings of a single word. Indeed, a native Santa Barbaran who has learned in a physics lecture while studying in Oxford that 'colour' is the English word for the property of reflecting electromagnetic radiation in the visible spectrum may be surprised to learn the truth of 'Colour is color'. To push the point even further, the same Santa Barbaran, whose limited experience of tomatoes consists in seeing them sliced and put into salads, on later consuming a tomato-based sauce in Oxford could be similarly surprised to learn the truth of 'Tomatoes are tomatoes', if it is pronounced: **To-mae-toes** (American) are **to-mah-toes** (British, or American affectation). This despite the fact that, however it is pronounced, the sentence has the logical form of a valid sentence: All *F*'s are *F*'s.⁷

Sentences like 'Cicero is Tully', on my view, belong very much with these examples. If they are exotic philosophically, then they are not only exotically necessary but exotically analytic, *a priori*, and, in the relevant (semantic) sense, uninformative: They are analytic, *a priori*, uninformative sentences for which understanding and reflection does not suffice for recognition of their truth.⁸ If 'Cicero is Tully' seems somehow more exotic than 'Ketchup is catsup', it is chiefly because the names 'Cicero' and 'Tully' are not mere etymological variations, so that one might

more naturally come to learn both without thereby becoming aware of their co-reference. Even for etymologically unrelated co-referential names, however, one can — and indeed one very often does — learn one of the two names by means of its co-reference with the other. I suspect that this is precisely the way most of us learn the name ‘Tully’.⁹

III

Quoting the passage from Donnellan, as well as passages from other pioneering direct-reference theorists and a passage from my former self, I claimed in *Frege's Puzzle* (pp. 78–79) that my account of the epistemological status of such sentences as ‘Cicero is Tully’ differed significantly from that of these other theorists.¹⁰ Rod Bertolet and Saul Kripke have independently objected that Donnellan’s account in terms of the sentence relativity of the concepts of apriority and aposteriority is in fact entirely within, and in significant respects truer to, the spirit and fundamentals of my own theory.¹¹ For *a priori* knowledge involves knowledge, and knowledge involves belief. And *Frege's Puzzle* also argued that belief is the existential generalization (on the third argument place) of a ternary relation *BEL* among believers, propositions, and some third type of thing, perhaps something like *ways of taking propositions*. My account thus makes such epistemic concepts as apriority and aposteriority relative concepts. As I have just admitted, one must take the proposition content in a particular way in order to recognize that a given sentence is true without an empirical investigation, simply by understanding it (reflecting on its content, etc.).

I did not argue, however, that belief is sentence relative. In fact, I do not say that belief is a ternary relation. Belief, on my view (as on the views of Frege, Alonzo Church, et al.), is a binary relation between believers and propositions. If the concept of belief is considered to be a relative concept on my account, it is not *sentence* relative but *way-of-taking* relative: one believes a given proposition under one way of taking it but not under another (where we understand ‘*A* believes *p* under *x*’ to mean that *BEL*[*A*, *p*, *x*]). More generally, our “epistemic access to propositions” (Bertolet) is not sentence relative but way-of-taking relative. For ‘Paderewski’-type reasons, ways-of-taking propositions cannot be identified with sentences in a language (and indeed ways-of-taking things generally cannot be identified with expressions

generally).¹² Sentences are too coarse-grained. Furthermore, even in the more typical case ('Cicero was talented' rather than 'Paderewski was talented'), a sentence in a language does not determine a unique way of taking its content except relative to a particular speaker.¹³

One can define, in a fairly natural and straightforward way, something like a sentence relative notion of sentential apriority — I shall call it *s*-apriority — in terms of the traditional (proposition-based rather than sentence-based) notion of apriority and my notion (proto-notion?) of a way of taking a proposition. We may say that a true sentence *S* is *s*-apriori with respect to a speaker *A* if something like the following obtains:

- (D1) The proposition content of *S* (with respect to some [*A*'s] context) is knowable [by *A*] by reflection (including deductive reasoning) while taking that proposition in the way *A* does when it is presented to *A* by means of (*A*'s version of) *S*, without recourse to experience *and without taking the proposition in some alternative way*.¹⁴

We would then say that a true sentence is *s*-aposteriori with respect to *A* if its content (with respect to some [*A*'s] context) is knowable [by *A*] but the sentence itself is not *s*-apriori with respect to *A*. One may similarly define, in a parallel manner, relative notions of *s*-informativeness and *s*-triviality. Then presumably, 'Cicero is Tully' would be *s*-aposteriori rather than *s*-apriori, and *s*-informative rather than *s*-trivial, with respect to someone who has learned the names 'Cicero' and 'Tully' but has not learned that they are two names of the same man. This comes mighty close to the claim that 'Cicero is Tully' is "*a posteriori*" and "informative."

We can also define absolute notions in terms of these relative notions. The most natural definition for absolute sentential *s*-apriority would be something like the following, where the metalinguistic variable '*S*' ranges over true sentences:

- (D2) *S* is *s*-apriori (*simpliciter*) =_{def.} *S* is [could be] *s*-apriori with respect to someone or other.

A true sentence would then be *s*-aposteriori (*simpliciter*) if its content (with respect to some context and time) is knowable but the sentence

itself is not *s*-apriori (*simpliciter*), i.e. if it is not [could not be] *s*-apriori with respect to anyone. Alternatively, one might define an absolute notion of sentential *s*-apriority in terms of a sentence's being *s*-apriori with respect to *everyone* who understands the sentence. This yields a correspondingly wider notion of *s*-aposteriority *simpliciter*, defined in terms of a sentence's failing to be *s*-apriori with respect to someone or other. I choose the former definitions for the absolute notions, in part, because it seems more natural to say that a sentence is *s*-apriori, then it is to say that it is *s*-aposteriori, whenever it is *s*-apriori with respect to at least some speakers, even if it might turn out to be *s*-aposteriori with respect to other speakers. For in that case, the content is still *knowable* independently of experience. Under the alternative definitions, situations like 'Ketchup is catsup' threaten to preclude any sentence from being deemed "*s*-apriori."

IV

I willingly concede, and even insist, that all of these epistemic notions are perfectly legitimate, and indeed epistemologically significant. But I would also note several additional features. First and foremost, none of these notions is identical with the traditional, proposition-based notions of apriority and aposteriority. Second, strictly speaking the proposed relative notions are not sentence relative; they are speaker relative. (The 's' in '*s*-apriori' stands for 'speaker relative'.) Also, they are probably undefined for cases like that of 'Tomatoes are tomatoes' *vis a vis* my native Santa Barbaran, or of 'Paderewski is Paderewski' *vis a vis* Kripke's character Peter, who does not realize that the pianist and the statesman are one and the same. For there is no single way of taking the trivial proposition that Paderewski is Paderewski that counts as *the* way that Peter takes it when it is presented to him by means of the sentence 'Paderewski is Paderewski'. (There are at least three different ways that Peter might take the proposition when it is so presented to him, depending on how he thinks the sentence is intended: The pianist is the pianist; the statesman is the statesman; the pianist is the statesman — if I may put the point this way.¹⁵) Furthermore, the proposed absolute notion of *s*-apriority does not support that claim that 'Cicero is Tully' is "*a posteriori*." A scholar who understands the sentence 'Cicero is Tully'

and knows that it is true (e.g. any philosopher of language who knows that ‘Cicero’ and ‘Tully’ are co-referential, and to whom the names both refer), at least if that scholar happens to be a Millian, may treat the names more or less interchangeably. Such a scholar is liable to take the proposition that Cicero is Tully, when thus expressed, in much the same way he or she would take it were it put instead by means of ‘Cicero is Cicero’.¹⁶ If such patently analytic sentences as ‘Tomatoes are tomatoes’ and ‘Paderewski is Paderewski’ are to counted *s*-apriori, then so is ‘Cicero is Tully’. Last but not least, the notions of *s*-apriority and *s*-aposteriority are no more (albeit no less) natural or fundamental to the spirit of my view of our cognitive access to propositions than is the corresponding name relative notion of love natural or fundamental to the spirit of Everyman’s view of love. (According to the name relative notion of love, Mrs. Jones, who does not realize that the demented grave-robber she loves is none other than her husband, may be described as *loving someone qua* ‘Jones the Ripper-Offer’ but no longer *qua* ‘Hubby Dear’.¹⁷) The proposed relative notions are derivative, contrived, nonbasic.

A less contrived notion would be a way-of-taking relative notion of sentential apriority. We may say that a true sentence *S* is *w*-apriori with respect to a way *x* of taking a proposition — or as I shall say instead, that *S* is simply *a priori with respect to x* — if something like the following condition obtains:

- (D3) *x* is a way of taking the proposition content of *S* (with respect to some context and time) and that proposition is knowable [by the agent of the context] by reflection (including deductive reasoning) while taking the proposition in way *x*, without recourse to experience and without taking the proposition in some alternative way.

A true sentence would be *a posteriori with respect to* a way *x* of taking a proposition if the sentence’s proposition content (with respect to some context and time) is knowable and *x* is a way of taking that proposition, but the sentence itself is not *a priori* with respect to *x*. We may thus say that whereas ‘Paderewski is Paderewski’ is *a priori* with respect to some ways of taking its proposition content, it is still *a posteriori* with respect to others (the pianist is the statesman).

These way-of-taking relative notions are arguably the basic ones on my view.¹⁸ But even they are not identical with the traditional, proposition-based ones. (Compare the relationship between *BEL* and belief.) More importantly, they do not support the claim that ‘Cicero is Tully’ is “*a posteriori*,” any more than the proposed absolute notions of *s*-apriority and *s*-aposteriority do. As we saw above, although ‘Cicero is Tully’ is *a posteriori* with respect to some ways of taking its content, a Millian philosopher who both understands the sentence and knows that it is true is liable to take its content in a way with respect to which the sentence is *a priori* rather than *a posteriori*. The fact that the sentence is *a priori* with respect to at least one way of taking its content is sufficient for the sentence to be *a priori (simpliciter)* — otherwise even ‘Tomatoes are tomatoes’ and ‘Paderewski is Paderewski’ should be counted “*a posteriori*.” Accordingly, if the way-of-taking relative notions of sentential apriority and aposteriority are taken as basic, something like the following definition (where ‘*S*’ ranges over true sentences) for absolute sentential apriority may be taken in place of more conventional definitions:

(D4) *S* is *a priori (simpliciter)* =_{def.} *S* is [could be] *a priori* with respect to some way of taking a proposition.

As usual, a true sentence would be *a posteriori (simpliciter)* if its proposition content (with respect to some context and time) is knowable but the sentence itself is not *a priori (simpliciter)*. Here this means that, although its content is knowable, the sentence is not [could not be] *a priori* with respect to any way of taking a proposition.

Recognition of the fact that ‘Cicero is Tully’ is *a priori simpliciter* is crucial to finding a philosophically satisfactory solution to Frege’s Puzzle: In the relevant sense, ‘Cicero is Tully’ does not differ in epistemological status from ‘Cicero is Cicero’. Combined with results obtained in earlier work, this yields the further result that the theory of direct reference does not have the consequence, which had been claimed, that there are (nontrivial) examples of necessary *a posteriori* sentences.¹⁹ About the closest I am able to come to accommodating the claim that ‘Cicero is Tully’ is necessary even though “*a posteriori*” is to acknowledge that ‘Cicero is Tully’ is not only necessary but is also [could also be] *s*-aposteriori with respect to some speakers, in particular

with respect to anyone who understands (his or her version of) the sentence without knowing that it is true.

I had criticized Donnellan's account on the grounds that it assumes that 'Cicero is Tully' and 'Cicero is Cicero' differ in epistemological status, judging 'Cicero is Tully' *a posteriori* even though 'Cicero is Cicero' is *a priori*.²⁰ I am persuaded, however, that Donnellan should be interpreted instead as making a different claim, one which I may be able to accept. He may be saying, for example, merely that (as we now put it) 'Cicero is Tully' is [could be] *s*-*a posteriori* with respect to anyone who understands the sentence but does not know that it is true. If so, I was indeed wrong to group him with other direct-reference theorists (such as my former self) who have maintained that 'Cicero is Tully' is *a posteriori* (*simpliciter*). However, I would still urge the several points made in the opening paragraph of this section in response. The fact that 'Cicero is Tully' is *s*-*a posteriori* with respect to anyone who understands it without knowing that it is true does not distinguish that sentence from 'Ketchup is catsup'.

V

Though identity sentences like 'Cicero is Tully' are every bit as *a priori* as the theorems of mathematics, the original motivation for the claim that 'Cicero is Tully' is *a posteriori* probably did not focus on the epistemology of its content. One indication of this comes by way of the complementary claim that had been made by some direct-reference theorists — notably Kripke and David Kaplan — that sentences like 'The Standard Bar is exactly one meter long' and 'Newman-1 will be the first child born in the 22nd Century' are *a priori* despite their contingency, if the reference of the term 'meter' is fixed by the description 'the length of the Standard Bar' and if the name 'Newman-1' is similarly "defined" as 'the first child to be born in the 22nd Century'.²¹ Those who declare such sentences *a priori* may not have intended thereby to separate the propositional contents of those sentences on epistemological grounds from knowledge gained by measuring a bar's length or by looking at one's watch at the time of a birth. Direct-reference theorists who deem 'Cicero is Tully' *a posteriori*, or the 'meter' and 'Newman-1' sentences *a priori*, sometimes seem to mean something more *linguistic*.

Their principal concern seems to be not with our knowledge of the contents of the sentences in question, but with the means by which we know that the sentences themselves are true. At the same time, they may mean something less *epistemological* than, for example, the observation that the truth in English of ‘Cicero is Tully’ is knowable only by means of experience. We have seen that the question of whether particular English sentences are true or false — even logically valid sentences — is an empirical matter. This is partly because the question of what any particular English sentence means is itself an empirical matter; even the Queen of England does not have innate knowledge of the language. What originally prompted the claim that the ‘meter’ and ‘Newman-1’ sentences are *a priori*, however, was the recognition that those sentences belong, in some sense, with those for which knowledge of the meaning — however empirical that knowledge may be — is sufficient to establish their truth.²² Likewise, the main point behind the claim that ‘Cicero is Tully’ is *a posteriori* may not be to mark that sentence off from the nonempirical sciences, but instead to mark it off from those sentences for which mere understanding is sufficient to establish their truth.

In what sense is our understanding of a sentence something that is sufficient in some cases and not in others to establish the sentence’s truth? Understanding the mathematical equation ‘ $5,278 + 3,639 = 8,927$ ’ involves knowing that the equation is true in standard mathematical notation if and only if the sum of 5,278 and 3,639 is 8,927.²³ One can thereby establish the falsity of the equation by an *a priori* calculation. But this involves something beyond merely understanding the equation. It involves arithmetic. If the notion of *understanding being sufficient to establish truth* is to differ in extension from that of *semantic content being knowable independently of experience* by excluding both this case and ‘Cicero is Tully’, and by including the ‘meter’ and ‘Newman-1’ sentences, the former notion needs to be made more precise, or least clearer.

Let us draw a distinction between *pure semantics* and *applied semantics*. It is a purely semantic fact about English that the definite description ‘the inventor of bifocals’ refers to (denotes, designates) the inventor of bifocals. It is also a semantic fact about English that ‘the inventor of bifocals’ refers to Benjamin Franklin. But the latter is a fact

of applied semantics; it obtains partly in virtue of the nonlinguistic, historical fact that it was Benjamin Franklin who invented bifocals. Similarly, whereas it is a purely semantic fact about English that ‘Snow is white’ is true if and only if snow is white, it is an applied semantic fact that ‘Snow is white’ is true. Certain sentences are special in that their truth value is settled entirely by pure semantics. It is a purely semantic fact about English for example that ‘Cicero is Cicero’ is true. For this fact is a logical consequence of the purely semantic fact that ‘Cicero is Cicero’ is true if and only if Cicero is Cicero.

The notion of a sentence’s truth being a fact of pure rather than applied semantics is, roughly, a notion of “truth solely by virtue of meaning.”²⁴ The epistemologically charged term ‘*a priori*’ is less appropriate for this notion than the more semantic epithet ‘analytic’. Nevertheless, I have often felt that this form of analyticity as truth-by-virtue-of-pure-semantics may be what is meant by particular uses of ‘*a priori*’.²⁵ The notion does have an epistemological dimension: for any sentence whose truth value is a logical consequence of pure semantics, anyone competent in the language is *ipso facto* in possession of sufficient information to determine that truth value by logic — never mind that knowledge of pure semantics for a natural language, and hence competence in the language, is gained only by means of experience.

Correspondingly, what is meant by the claim that ‘Cicero is Tully’ is “*a posteriori*” may be that the sentence’s truth is a fact of applied rather than pure semantics for English. The resulting claim — which is supposed to be a consequence of direct reference — that certain sentences, including ‘Cicero is Tully’, are necessary even though their truth is a fact of applied rather than pure semantics (i.e. synthetic yet necessary) may or may not be as surprising or remarkable in the present philosophical age as the claim that some necessary truths are knowable only by means of experience. (Consider the mathematical equation, for example, or *a priori* principles of metaphysics.) But it is hardly devoid of philosophical significance.

Is it the case, though, that the fact that ‘Cicero is Tully’ is true is not a purely semantic fact about English? Certainly a speaker who is in full command of the language may nevertheless fail to know that ‘Cicero is Tully’ is true. Even a master logician who is fully competent in the use of ‘Cicero’, ‘Tully’, and the ‘is’ of identity may be in no position to infer

that 'Cicero is Tully' is true from the purely semantic fact that 'Cicero is Tully' is true if Cicero is Tully. On the other hand, it is a purely semantic fact that 'Cicero' refers to Cicero, and it is also a purely semantic fact that 'Tully' refers to Tully. The latter, according to the Millian view, is identical with the fact that 'Tully' refers to Cicero. And it is a truth of logic that if 'Cicero' and 'Tully' both refer to Cicero, then there is something to which both names co-refer. Given the purely semantic facts for English, it follows that 'Cicero is Tully' is true. Alternatively, it is a fact of pure semantics for English that 'Cicero is Tully' is true if Cicero is Tully. According to Millianism, that Cicero is Tully is nothing more than the logical truth about Cicero that he is him. On the Millian theory, then, 'Cicero is Tully' is "*a priori*" even in the sense that its truth is logically settled by pure rather than applied semantics. It is true solely by virtue of meaning.

Why is the master logician unable to infer by *modus ponens* that 'Cicero is Tully' is true from his *a priori* knowledge concerning Cicero that he is him, if the latter is really nothing less than knowledge of the fact that Cicero is Tully? The answer is that if the logician does not already know that 'Cicero is Tully' is true, he or she knows the conditional fact about English that 'Cicero is Tully' is true if Cicero is Tully only by taking that proposition in a way that does not reveal the special logical status of its antecedent; the logician does not recognize the antecedent proposition, so taken, as the truism concerning Cicero that he is him. The logician is in the same boat as the speaker who understands 'Ketchup is catsup' without knowing that it is true.²⁶

It is difficult for the direct-reference theorist to escape our conclusion: Identity sentences like 'Cicero is Tully' are neither informative nor *a posteriori*, nor *s-aposteriori*, nor is their truth a matter of applied rather than pure semantics. 'Cicero is Tully' and 'Ketchup is catsup' are birds of a feather. Both are *a priori* and *s-apriori*, uninformative and trivial. Indeed, both are equally analytic.²⁷

NOTES

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¹ Saul Kripke, *Naming and Necessity* (Harvard University Press, 1972, 1980), pp. 20–21, 28–29, 104, 108–109, and *passim*. Kripke partially rescinds some of the relevant

formulations from *Naming and Necessity*, in "A Puzzle about Belief," in N. Salmon and S. Soames, eds., *Propositions and Attitudes* (Oxford University Press, 1988), pp. 102–148, at pp. 134–135, 147n44. The example of 'Cicero is Tully' is evidently due to John Stuart Mill, who argued that the sentence asserts that the names 'Cicero' and 'Tully' are co-referential (*A System of Logic*, Book I, Chapter V "Of the Import of Propositions," Section 2).

² This, or some variation of it (e.g. the observation that it is *a posteriori* that 'Cicero' and 'Tully' are co-referential in English), is a common misinterpretation of the claim that a sentence like 'Cicero is Tully' or 'Hesperus is Phosphorus' is *a posteriori* or informative. See, for example, Howard Wettstein, "Turning the Tables on Frege or How is it that 'Hesperus is Hesperus' is Trivial?" in J. Tomberlin, ed., *Philosophical Perspectives, 3: Philosophy of Mind and Action Theory* (Atascadero, CA.: Ridgeview, 1989), pp. 317–339, especially at pp. 331–334. I reply to Wettstein in "How *Not* to Become a Millian Heir," *Philosophical Studies*, 62, 2 (May 1991), pp. 165–177, at pp. 166–169.

³ Donnellan is not confused regarding the point raised in the previous paragraph. The quoted passage speaks of what is involved in seeing the proposition that Cicero is Tully to be true. Donnellan drew the distinction between the claim that the semantic content of a sentence is knowable *a priori* and the claim that the fact that the sentence is true is knowable *a priori* in his earlier work "The Contingent *A Priori* and Rigid Designators," in P. French, T. Uehling, and H. Wettstein, eds., *Contemporary Perspectives in the Philosophy of Language* (Minneapolis: University of Minnesota Press, 1977, 1979); pp. 45–60, at p. 51. (Donnellan credits Alvin Plantinga and Michael Levin with having drawn the distinction in their earlier criticisms of Kripke. Ironically, Kripke had drawn a very closely related distinction, in *Naming and Necessity*, at pp. 102–103. Cf. my *Frege's Puzzle* (Atascadero, Calif.: Ridgeview, 1986, 1991), pp. 137–138.)

⁴ The argument is given in section B.1, pp. 133–138, of *Frege's Puzzle*. The phrases 'knowable by means of' and 'knowable on the basis of' pertain to the epistemic *justification* for the proposition in question. In saying that a proposition is knowable solely on the basis of reflection without recourse to (independently of) experience, one is denying that experience is required to play a certain key role in that justification. Specifying that key role in a philosophically significant way is by no means trivial. It is arguable, for example, that experience may be a necessary component of the epistemic justification for a given proposition in some way that does not disqualify the proposition from being *a priori*. It is possible that the terms '*a priori*' and '*a posteriori*,' as used by philosophers, are ambiguous on this point. See my "How to Measure the Standard Metre," *Proceedings of the Aristotelian Society*, New Series, LXXXVIII (1987/1988), pp. 193–217, at pp. 201–203 and especially pp. 203–204n. If experience is not required at all, beyond merely enabling one to apprehend the proposition in question (by giving one the requisite concepts, for example), then that proposition is unquestionably *a priori*. This is what I claim for the contents of 'Cicero is Tully' and similar identity sentences.

⁵ J. L. Austin, who had a nose for detecting extremely subtle shades of meaning, had held that "the natural economy of language" prevented there being two English words with exactly the same function, without even the slightest difference in meaning. John Searle reports that the example of 'furze' and 'gorse' was going around Oxford in the fifties as a counterexample to Austin's claim. Evidently Austin conceded that he could not find any difference in meaning between the two, declaring the pair a singular instance of authentic English synonyms.

⁶ Cf. my "How to Become a Millian Heir," *Nous*, 23, 2 (April 1989), pp. 211–220, at p. 216f.

⁷ Cf. my "A Millian Heir Rejects the Wages of Sinn," in C. A. Anderson and J. Owens, eds., *Propositional Attitudes: The Role of Content in Language, Mind, and Logic* (Stanford, CA.: CSLI, 1990), pp. 215–247, at p. 221n10. The tomato example

occurred to me serendipitously when giving the 'ketchup'/'catsup' example in Oxford. I was informed that the example did not work there, because 'catsup' is not used in British English. Not to despair, a resourceful member of the audience (who evidently consumed little ketchup herself) suggested, in her native pronunciation, that I replace 'catsup' with 'tomato sauce'.

See note 5 above. Some may see the presence of 'catsup' in American English as completely superfluous — "a dispensable linguistic luxury" — perhaps even as extravagant. But then America is often seen as the Land of Plenty of Excess, and luxuries of surplus do have their value. (Austin's intended thesis of "the natural economy of language" may have been confined in scope to languages of more ascetic cultures.)

⁸ Of course, 'Cicero is Tully', unlike 'Tomatoes are tomatoes', does not have the form of a logically valid sentence. All the more reason that a competent speaker can fail to recognize its semantic content as itself a truth of logic.

⁹ This is even true for the peculiar case of 'Hesperus' and 'Phosphorus', in which individuating descriptions may be conventionally associated with the names ('the Evening Star' and 'the Morning Star'). Kripke says in *Naming and Necessity* (pp. 80–81) that it is a tribute to the education of philosophers that so many have held that the name 'Cicero', for the average person, means something like "the man who denounced Catiline," since most speakers can only identify Cicero indefinitely as *a famous Roman orator*. Actually, most speakers who can use the name 'Cicero' probably cannot identify him even that well. More rare still is someone who has been introduced to the name 'Tully' without being told something like that it is simply "another name of Cicero." (Cf. Kripke's remarks concerning the case of 'Cicero'/'Tully' in "A Puzzle about Belief," at pp. 110, 116. See also his remarks contrasting that case with 'Hesperus'/'Phosphorus', at pp. 146–147n43.)

There may be a further reason that 'Cicero is Tully' may seem more exotic philosophically than 'Ketchup is catsup'. The former may also seem more exotic to some than 'Furze is gorse', even though 'furze' and 'gorse' are, like 'Cicero' and 'Tully', two words rather than alternative spellings of a single word. This may be related to the fact that 'furze' and 'gorse' are, like 'ketchup' and 'catsup', mass nouns rather than proper names. One may be thinking of them as general terms, rather than as simple singular terms. Seen in this light, 'Ketchup is catsup' probably does not have the form: $a = b$. Even on Mill's theory — as well as on my own — there is a systematic divergence between semantic content ("connotation") and extension ("denotation") for predicates and common nouns. This does not alter the fact, however, that on the Millian theory, 'Cicero' and 'Tully' are every bit as identical in meaning as any pair of synonymous common nouns. (What about 'rabbit' and 'hare'?)

¹⁰ I would add to that set of quotations the following from David Kaplan: "The Babylonians knew what Hesperus was, and knew what Phosphorus was, but didn't know that they were the same" ("Afterthoughts" to "Demonstratives," in J. Almog, J. Perry, and H. Wettstein, eds., *Themes from Kaplan* (Oxford University Press, 1989): pp. 481–614, at p. 607).

¹¹ Rod Bertolet, "Salmon on the A Priori," *Analysis*, 51, 1 (January 1991), pp. 43–48. Kripke first made the objection in a conversation concerning my claim that sentences like 'Cicero is Tully' are *a priori*. Kai-Yee Wong makes a similar criticism in "A Priority and Ways of Grasping a Proposition," *Philosophical Studies*, 62, 2 (May 1991), pp. 151–164. I reply to Wong in "How Not to Become a Millian Heir," at pp. 169–173.

¹² Saul Kripke, "A Puzzle about Belief," pp. 130–131.

¹³ Cf. *Frege's Puzzle*, pp. 75, 175–176n5, and especially 120, 170n1, 173–174n1.

¹⁴ Brackets indicate alternative formulations. We shall not be concerned here with the subtle differences that distinguish the corresponding alternatively defined notions. Some scholars would note that the notion of *s*-apriority must be relativized further to a particular language, since the same sentence *S* appears, or can appear, in multiple

unrelated languages, each time with a completely different meaning. Any required relativization to a language will be suppressed throughout this discussion.

¹⁵ Cf. the character Elmer *vis a vis* 'Bugsy Wabbit is Bugsy Wabbit', from Frege's *Puzzle*, pp. 93–94, and *passim*.

¹⁶ See note 9 above. Cf. "A Puzzle about Belief," at p. 116; and my "Illogical Belief," in J. Tomberlin, ed., *Philosophical Perspectives, 3: Philosophy of Mind and Action Theory* (Atascadero, CA: Ridgeview, 1989), pp. 243–285, especially at 267–268.

¹⁷ Frege's *Puzzle*, pp. 103–105.

¹⁸ I say 'arguably'. Is the way-of-taking relative concept of love (on which Mrs. Jones loves her husband relative to one way of taking him but not relative to another) more basic in Everyman's conceptual scheme than the absolute concept of love? (Certainly there is a sense in which the relative concept *underlies* the absolute one.)

¹⁹ Cf. G. W. Fitch, "Are There Necessary *A Posteriori* Truths?" *Philosophical Studies*, 30 (1976), pp. 243–247. In *Reference and Essence* (Princeton University Press, 1981), I explored, and disputed, the claim (made by Hilary Putnam and others) that the direct-reference theory has the "startling consequence" that sentences like 'Water consists of two parts hydrogen and one part oxygen' express necessary truths despite being *a posteriori*. This is not to say that the sentence is not necessary *a posteriori*. Various general principles of essentialism, when combined with direct reference and with uncontroversial, empirical observations, yield nontrivial examples of necessary *a posteriori* sentences. If we let 'S' and 'E' name the gametes from which I developed, the sentence 'Saul Kripke did not spring from S and E' may be another such example. (A trivial example of a necessary *a posteriori* sentence is 'Saul Kripke actually lives in Princeton, New Jersey'.)

²⁰ Contrary to Bertolet (p. 47), my criticism was not that Donnellan's account illicitly assumes that 'Cicero is Tully' and 'Cicero is Cicero' differ in content. Donnellan explicitly rejects that view, in the very passage quoted.

²¹ Kripke, *Naming and Necessity*, pp. 54–56, 63, 79n; David Kaplan, "Dthat," in P. French, T. Uehling, and H. Wettstein, eds., *Contemporary Perspectives in the Philosophy of Language* (Minneapolis: University of Minnesota Press, 1977, 1979); pp. 383–400, at p. 397. Compare Kaplan, "Demonstratives" and the "Afterthoughts" thereto, at pp. 536–539, 550, 560, 597, 604–607. Kripke has modified his view of the epistemological status of sentences like the 'meter' and 'Newman-1' sentences since the appearance of *Naming and Necessity*.

²² Kripke says: "What . . . is the *epistemological* status of the statement ['The Standard bar is one meter long at time t_0], for someone who has fixed the metric system by reference to [the Standard Bar]? It would seem that he knows it *a priori*. For if he used [the Standard Bar] to fix the reference of the term 'one meter', then as a result of this kind of 'definition' (which is not an abbreviative or synonymous definition), he knows automatically, without further investigation, that [the Standard Bar] is one meter long" (*Naming and Necessity*, p. 56). But what the reference-fixer knows automatically as a result of his reference-fixing definition is that the 'meter' sentence is true (in his own idiolect); he knows automatically without investigating the Standard Bar that however long it is, that length is designated by the phrase 'one meter'. He does not automatically know of that length that the bar is exactly (or even roughly) that long.

For extended discussion see the articles by Donnellan and me cited in notes 3 and 4 above. The burden of those articles was to criticize the claim that such sentences as the 'meter' and 'Newman-1' sentences semantically contain *a priori* truths. The interpretation that will be suggested in the present section of this paper therefore cannot capture the intended import of Donnellan's claim that the proposition about Cicero that he is him may be *a posteriori* relative to the sentence 'Cicero is Tully' even if it is *a priori* relative to 'Cicero is Cicero'.

²³ It is arguable that such metalinguistic '*T*-sentences are not always true, since the

object-language sentence involved may be neither true nor false — for example, “‘The present king of France is bald’ is true in English if and only if the present king of France is bald”. Even for this case, however, understanding the sentence involves: (i) knowledge that the present king of France is bald if the sentence is true; and (ii) the ability to infer that the sentence is true from the fact that the present king of France is bald, if there were such a fact. (We ignore for present purposes cases in which the object-language sentence attempts to make a metalinguistic assertion.)

²⁴ I do not mean the phrase in the traditional sense, which rules out that the sentence in question describes an extralinguistic fact and is in that sense true partly by virtue of a feature of the world. Nor do I wish to be associated with the philosophical thesis, which has traditionally gone hand in hand with the analytic-synthetic distinction, that sentences like ‘All husbands are married’ are devoid of extralinguistic, factual content. Indeed, I think it is obvious that even logical validities like ‘All married men are married’, since they are contentful and true, describe facts — typically extralinguistic (albeit particularly unexciting) facts that are both necessary and knowable *a priori*. There is a natural and straightforward sense in which such a sentence is, like any contentful and true sentence, true “in virtue of” both its meaning and the extralinguistic fact that it describes. A better phrase for the notion of analyticity that I am embracing here is ‘true as a consequence of meaning alone’. An analytic sentence, in the sense in which I am using the term, is a contentful sentence which is true (and hence true in virtue of both its meaning and some fact about the world), and for which the very fact that it is true is itself a logical consequence entirely of purely semantic facts about the sentence.

²⁵ Cf. “How *Not* to Become a Millian Heir,” at p. 172. This notion of analyticity differs slightly from that given in *Frege’s Puzzle*, pp. 133–135. The latter is roughly the notion of a sentence whose proposition content is a logical truth. I argued there that sentences like ‘Cicero is Tully’ are analytic in the latter sense.

My distinction between pure semantics and applied semantics is loosely related to a distinction of Rudolf Carnap’s, between what he called ‘pure semantics’ and ‘descriptive semantics’ — though the former distinction is free of many (not all) of the latter’s controversial philosophical underpinnings. Carnap’s notion of “pure semantics” concerned only artificial languages whose semantics is stipulated; any semantical matter concerning a natural language — including its pure semantics, in my sense — was *ipso facto* a matter of “descriptive semantics.” See his *Introduction to Semantics and Formalization of Logic* (Harvard University Press, 1942, 1943), volume I, section 5, at pp. 11–13. My notion of a sentence whose truth is a fact of pure rather than applied semantics is closely related to Carnap’s notion of “*L*-truth,” although the latter corresponds more closely to the contemporary notion of *logical truth* as truth in all models for the language. See Carnap, *Introduction to Semantics and Formalization of Logic*, volume I, pp. 60–61, 79–80, 134–137; and *Meaning and Necessity* (University of Chicago Press, 1947, 1956), section 2, at pp. 9–10. Carnap proposed *L*-truth as constituting an explication equally of analyticity and of necessity.

²⁶ This general phenomenon is the central topic of “Illogical Belief.” There is a brief discussion of the particular inability in question at pp. 259–261 and *passim*. See especially, p. 278n19. Cf. “How *Not* to Become a Millian Heir,” pp. 168, 174–175n11.

²⁷ The ‘meter’ and ‘Newman-1’ examples constitute an interesting anomaly. Given the manner in which the reference of ‘Newman-1’ is fixed, the fact that ‘Newman-1’ refers to the first child to be born in the 22nd Century, and hence also the resulting fact that the ‘Newman-1’ sentence is true, do indeed seem to be facts of pure rather than applied semantics. One might say, therefore, that the ‘Newman-1’ sentence is “analytic.” This is a purely terminological matter of decision. Interestingly, the further fact that ‘Newman-1’ refers to Newman-1 seems to be a fact of applied rather than pure semantics, since it

obtains only by virtue of the nonlinguistic fact that Newman-1 (i.e. that very future person) will be the first child to be born in the 22nd Century. Cf. "How to Measure the Standard Metre," at pp. 200–201*n*10.

Even if the 'Newman-1' sentence is declared analytic, it is widely recognized nowadays that it does not follow that the sentence's content is necessary. Still, it is usually assumed that the content of any sentence that is true solely by virtue of meaning is *a priori*. I maintain that the 'meter' and 'Newman-1' sentences are both contingent and *a posteriori* in the sense that their contents are contingent and knowable only by means of experience. (Those sentences are counted synthetic under the alternative notion of analyticity given in *Frege's Puzzle*. They are also deemed synthetic on Kripke's alternative definition of analyticity — in *Naming and Necessity*, p. 39 — though for a different reason. See especially pp. 56*n*, 122–123*n* of that work, and notes 22 and 24 above.)

Whereas the philosophical significance of the existence of propositions that are both contingent and *a priori* is apparent, the philosophical significance of the fact that such sentences as the 'Newman-1' and 'meter' sentences express contingencies even though their truth is a matter of pure semantics is less so. One consequence (noted by Kaplan, in "Demonstratives," p. 540) is that W. V. Quine was wrong to see the "second grade of modal involvement" as recasting analyticity, which is a meta-theoretic notion, as the object-language notion of necessity. Carnap was equally wrong to identify necessity with truth by pure semantics. If I am correct, another consequence is that analyticity, in this sense, is no guarantee of apriority (knowability independently of experience).

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